

REMARKS

Claims 1, 10, 12-52, 55, 60, 62-107, 109-117, 119-131, 133-141, 143-153, 155-166, 168-170, and 172-184 are pending. Claim 10 is amended to change dependency from canceled claim 2. Claims 14, 24-33, 43-45, 47-51, 64, 66-69, 76, 77, 80-87, 102-107, 109-117, 119-131, 133-141, 143-153, 155-166, 168-170, and 172-184 are withdrawn.

Rejection Under 35 U.S.C. § 112

Claims 10 and 12-13 were rejected under 35 U.S.C. § 112, second paragraph as allegedly indefinite due to their dependency of claim 10 from canceled claim 2. This rejection is moot in view of the amendment to the claim 10 to depend from claim 1.

Rejections Under 35 U.S.C. § 103

Claims 1, 10, 12, 13, 15-23, 32-42, 46, 52, 55, 60, 63, 65, 70-75, 78, 79, and 88-101 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over U.S. Patent No. 6,159,445 ("the Klaveness patent") and U.S. Patent No. 6,123,923 ("the Unger patent") in view of Lee, *et al.*, Biotechnol. And Bioeng., 2001, 73, 135-145 ("the Lee article") and further in view of the Chem. Eur. J. 1995, 1, 645-651 ("the Lin article"). To establish a *prima facie* case of obviousness, there must be some reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007). Moreover, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The reason to make the claimed combination, and a reasonable expectation of success, must be found elsewhere than in Applicants disclosure, such as in the prior art, the nature of the problem to be solved, or in the knowledge/understanding of the person of ordinary skill in the art. MPEP § 2143; *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Thus, the applicant's disclosure may not be used as a blueprint from which to construct an obviousness rejection. Furthermore, according to MPEP § 2141.02, "[i]n determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would

have been obvious.” Applicants submit that the instant rejection does not meet these requirements.

The Klaveness patent is alleged to disclose contrast agents that have an absorption and/or emission in the 600 to 1300 nm range. Office Action at page 8. Applicants note, however, that the Klaveness patent lists a laundry list encompassing a large number of compositions to be used in this function. *See*, the Klaveness patent at column 15, line 63 to column 16, line 20. While porphyrins are mentioned generically, there is no teaching or suggestion for the use two porphyrin moieties linked by a hydrocarbon bridge having at least one unsaturated moiety much less such a moiety that exhibits an integral emission oscillator strength that is greater than the emission oscillator strength manifest by either one of the porphyrin moieties individually. The Klaveness patent is also defective in its teaching concerning the instant amphiphilic copolymers that have at least one hydrophilic polymer bonded to at least one hydrophobic polymer. As was the case with the contrast agent, the list of carriers for the contrast agent is quite extensive. *See*, the Klaveness patent at columns 12-14 and 17. Based on the extensive list of possibilities, it would not be obvious for one skilled in the art to select the amphiphilic block copolymers of EP 166596 (column 17, lines 49-50 of the Klaveness patent) for use as a vehicle to carry the contrast agent. Nor is there any guidance or direction to pick and choose the particular combinations that would allow one to arrive at the claimed invention. In short, no element of any claim under examination can clearly be found in the Klaveness patent. Such shortcomings in a primary reference are not consistent with obviousness.

The Unger patent, like the Klaveness patent, generically discloses porphyrins among an extensive list of photoactive agents but provides no teaching or suggestion for the use two porphyrin moieties linked by a hydrocarbon bridge having at least one unsaturated moiety much less such a moiety that exhibits an integral emission oscillator strength that is greater than the emission oscillator strength manifest by either one of the porphyrin moieties individually. Synthetic vessel forming material are selected from a large list of possibilities where no preference is stated for this possibility. *See*, column 17, line 10 to column 37, line 19 of the Unger patent. In the Unger patent, like the Klaveness patent, there is no clear teaching of all elements of any claim under examination.

The Office seeks to cure these defects by asserting two additional references. The Lee article is used to provide a disclosure of amphiphilic diblock copolymer and to assert favorable properties attributed to these compositions. The Lin article is asserted to teach certain linked porphyrins. In the present reconstruction, however, *all* elements from the teachings of the primary reference are replaced by components from the additionally cited art or selected from an extensive list within the primary patent. While the Office (Office Action at page 5) asserts that “[p]atents are relevant as prior art for all they contain”, they also must teach enough to lead one skilled in the art to make the claimed combination. It should be noted that porphyrins are only one of many photoactive agents disclosed by the cited art such that it is unclear why one would necessarily choose a porphyrin as opposed to one of the other options, much less choose porphyrin and then pick a porphyrin from the Lin article. Similarly with the amphiphilic diblock copolymer element, it not clear why one skilled in the art would make the changes required by the Office’s reconstruction. Based on the significant picking and choosing coupled with the significant changes required to the teachings of Klaveness and Unger patents, it seems that the instant invention can only be derived at through the use of impermissible hindsight based on Applicant’s blueprint. Because hindsight reconstruction must be made only with knowledge available to one skilled in the art at the time of the invention and independent of Applicant’s blue print, the rejection should be withdrawn.

In addition, there is nothing in the Lin article that suggests that the compositions would be an improvement over the moieties used in the primary references. As noted in the instant specification, the multiporphyrins of the instant claims can exhibit an integral emission oscillator strength that is greater than the sum of the oscillator strengths of the monomers. *See*, paragraph 11 spanning pages 4-5. The Lin article teaches nothing about this enhanced property which might make the multiporphyrins of the instant claims to be attractive for use in the methods of the Unger patent. The Office dismissed this argument stating that “the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability.” Office Action at page 6. It is not Applicant’s suggestion that discovery of a new property is the basis for patentability. Rather, the argument speaks to the motivation to combine the cited art. Without Applicant’s patent application in hand and without its teachings of the

special properties of the particular porphyrins, sufficient motivation to make to combination of art proposed by the Office is lacking.

In view of the foregoing, Applicants submit that the instant claims are not obvious in view of the cited art.

Conclusions

The foregoing is believed to constitute a complete and full response to the Office Action of record. Accordingly, an early and favorable reconsideration of the rejections and an allowance of all of pending claims is earnestly solicited. Should the Examiner determine that any further action is necessary to place the Application in condition for allowance, the Examiner is encouraged to contact the undersigned by telephone.

Respectfully submitted,

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